

Figure S1: Vertical distributions of the changes in NO and VOCs induced by BC in Nanjing at 10:00, 12:00 and 14:00. BLHs of the two experiments (black and red dashed line denote BLH in Exp\_WF and Exp\_WFexBC, respectively) are also presented herein.

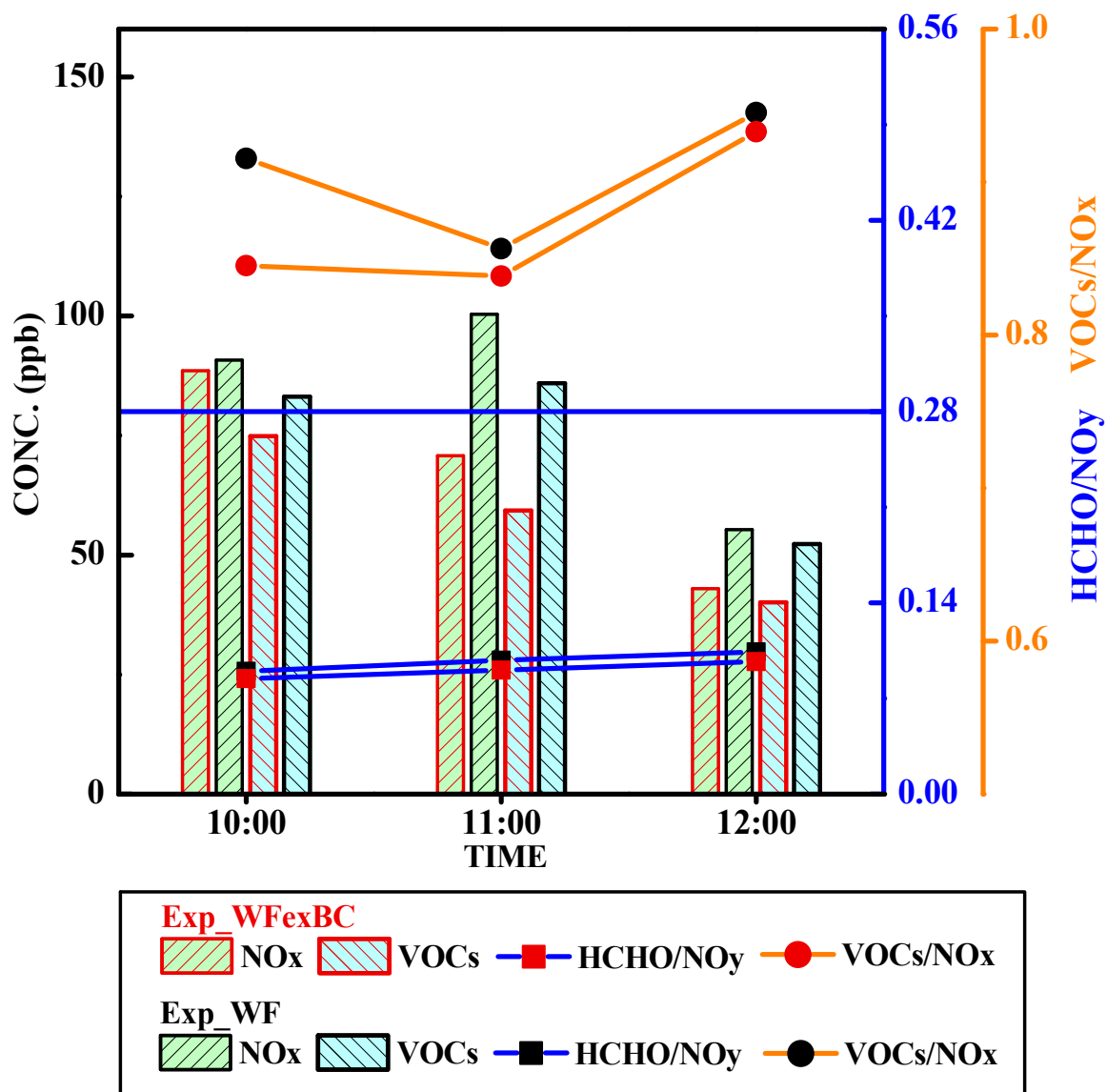


Figure S2: Concentrations of NO<sub>x</sub> and VOCs with (Exp\_WF) and without (Exp\_WFexBC) the impacts of BC at surface from 10:00 to 12:00. Ratios of VOCs/NO<sub>x</sub> with (solid line with black circles) and without (solid line with red circles) the impacts of BC are denoted in this figure. Ratios of HCHO/NO<sub>y</sub> with (solid line with black squares) and without (solid line with red squares) the impacts of BC are also denoted in this figure. The grey line presents the critical value and below which the ozone formed under VOC-limited conditions.